

a substrate;

a liquid cooling mechanism composed of

a heat sink formed in a flat shape to have a heat-receiving face at a surface thereof intended to be in contact with said heating element and having a liquid channel formed therein,

a pump portion having an impeller rotatably provided in a housing formed in a flat shape within said substrate to circulate said cooling liquid, metal pipes for circulating said cooling liquid therethrough;

a forcible air cooling mechanism composed of

a radiating fin provided on the outer surface of said metal pipes and a fan to cool said radiating fin and said housing;

said pump portion of the liquid cooling mechanism and said fan of the forcible air cooling mechanism being provided on the substrate in a vertically aligned positional relationship such that said liquid cooling mechanism and said forcible air cooling mechanism are unified.

6. (Amended) The cooler for an electronic device as claimed in Claim 4, wherein said motor substrate is made of an insulating plate having a coil formed on the surface thereof, said fan is in the form of a thin plate having a plurality of bent blades on the periphery of a thin plate having a rotation axis at the middle portion thereof, and said motor substrate, said fan and said pump portion in a flat form are laminated on each other.

Please add the following new claim:

11. (New) The cooler for an electronic device as claimed in Claim 5, wherein said motor substrate is made of an insulating plate having a coil formed on the surface thereof, said fan is in the form of a thin plate having a plurality of bent blades on the periphery of a thin plate having a rotation axis at the middle portion thereof, and said motor substrate, said fan and said pump portion in a flat form are laminated on each other.

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